



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,454	01/14/2004	David R. Battiste	CPCM:0005/FLE (210021)	5638

7590 07/14/2006

Michael G. Fletcher
FLETCHER YODER
P.O. Box 692289
Houston, TX 77269-2289

EXAMINER

TESKIN, FRED M

ART UNIT PAPER NUMBER

1713

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,454

Applicant(s)

BATTISTE, DAVID R.

Examiner

Fred M. Teskin

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 29-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 29-35 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Applicant's election of the invention of Group I, claims 1-14 and 29-35, in the reply filed on May 2, 2006, is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The drawings are objected to because in Figure 1, the arrow of the directional line between elements 32 and 38 should be pointed *toward* 32 (not away), for consistency with the description: additive 38 is "added to" the fluff products 28 in subsystem 32 (see, page 14, ll. 6-8). A corrected drawing sheet in compliance with 37 CFR 1.121(d) is required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

Art Unit: 1713

corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim 11 is objected to because of the following informalities: in the final line, “and” apparently should read –or- (assuming the specific properties recited are alternative limitations; *cf.*, page 30, line 15 of the specification). Appropriate correction is required.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14 and 29-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lange et al, alone or in view of Buchanan et al.

The applicant’s invention, as defined in claim 1, is a method of monitoring a polyolefin production process, comprising:

placing a spectroscopic probe into a conduit of a polyolefin production system, having conduit contents that comprise at least one of a feedstock, a feed stream, a reactor discharge, a recovered component, a purified component, a polymer fluff, an extruder feed, and a polymer pellet stream;

exposing the conduit contents to a radiation emission from the spectroscopic probe;

acquiring a spectroscopic signal in substantially real-time from the conduit contents in response to the radiation emission via the spectroscopic probe;

analyzing the spectroscopic signal to determine at least one property of interest of a component of the conduit contents.

Lange et al disclose a process control method for manufacturing polyolefin that is said to result in less variation in product density during the production of a given type of product as well as a more rapid production change to a new density type of product. The process includes the steps of determining the concentration of a principal monomer, e.g., ethylene and the concentration of a co-monomer in a process stream of solvent by high resolution multi-wavelength vibrational spectroscopy analysis; and controlling the rate of addition of the principal monomer, the rate of addition of the co-monomer, or both, according to the determination of the preceding step (col. 2, ll. 28+).

In the claimed invention, the "conduit contents" can be a feed stream to a reactor and the expression "determine at least one property of interest" is considered readable on ascertaining the concentration of monomeric component(s) of the conduit contents.

As such, the Lange et al reference differs from the claimed invention only in that placement of a spectroscopic probe *into a conduit* to acquire a spectroscopic signal in substantially real-time from the contents of the conduit is not specifically disclosed. Instead, Lange et al detail the incorporation of an infra-red (IR) cell in a pipe 33 through which a process stream flows for the purpose of acquiring spectroscopic signals

Art Unit: 1713

representative of the concentration of ethylene and co-monomers such as 1-octene and propylene (col. 3, lines 35+ and Fig. 3).

Nevertheless, Lange et al is not limited to use of infrared spectroscopy or an IR cell. In fact, the patentees define the term "vibrational spectroscopy" to mean infrared and Raman spectroscopy and positively state that a probe can be used *instead of a cell* (col. 4, ll. 5-7 and 18-20). In view of this stated definition and alternative teaching of a probe, one of ordinary skill in the art would have been inclined to place a spectroscopic probe such as a Raman probe as per claims 2 and 30, in the process stream pipe of Lange et al to acquire spectroscopic signals in substantially real-time from the principal monomer and co-monomer flowing therethrough. The expectation of thereby obtaining equivalent spectroscopic data on the concentration of such monomer and co-monomer would have provided the requisite motivation to so modify Lange et al and produce the claimed invention.

Alternatively, it would have been obvious to one of ordinary skill in the art to perform the determination step of Lange et al using a Raman probe placed in the patentees' process stream pipe given the reference teachings noted above and the fact that it is well known from Buchanan et al that (1) a Raman fiber optic probe is useful for obtaining reliable spectroscopy measurements in harsh environments of elevated temperature and pressure, including polymer production processes; and (2) such probe may be *placed in a process stream* of a manufacturing installation in order to achieve successful spectral acquisition (Buchanan, col. 5, ll. 54+ and Examples 2-4).

Art Unit: 1713

Accordingly, the applied art is deemed to provide a proper basis for rendering the claimed subject matter *prima facie* obvious to a person having ordinary skill in the art at the time of applicant's invention.


No claims are allowable at this time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMTeskin/07-06-06


FRED TESKIN
PRIMARY EXAMINER
1713